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ABSTRACT

Three different approaches to metaevaluation are described and shown to have been applied to the study of Project Follow Through. These approaches include evaluation of primary evaluations, integrative meta-analysis in which results from several primary evaluations are combined, and secondary analysis involving the independent reanalysis of the raw data from a primary evaluation. These approaches are discussed in terms of the roles of the participants in the national evaluation of Project Follow Through and subsequent to the national evaluation. The metaevaluation models are contrasted with respect to three dimensions: (1) whether the metaevaluation is performed parallel or subsequent to the primary evaluation; (2) whether or not the raw evaluation data are reanalyzed by the metaevaluator; and (3) whether a single or a multiple data set is used. The key premise of metaevaluation is that evaluations should be subject to critical review in order to provide a balanced perspective for decision makers. (Author/CTM)

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Follow Through: A Case Study in Metaevaluation Research

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Running Head: Metaevaluation Case Study

Abstract

Topics such as the evaluation of evaluations, meta-analysis, and secondary analysis are subsumed under the general rubric of metaevaluation research. This paper shows how several models of metaevaluation research have been applied in the national Follow Through evaluation. It identifies and describes the roles of participants in the Follow Through evaluation, defines several models of metaevaluation research, and assesses the degree to which Follow Through evaluation roles map onto the metaevaluation models. The conclusion emphasizes the utility of multiple metaevaluation research perspectives for enhancing the quality of evaluations.

FOLLOW THROUGH: A CASE STUDY IN METAEVALUATION RESEARCH

The field of educational evaluation is self-conscious and self-critiquing. Witness the growth in literature on the evaluation of evaluations. For example, recent studies by Bernstein and Freeman (1975), Bourque and Freeman (1977), and Minnesota Systems Research Inc. (1976) provide empirical reviews of the quality of evaluation research. To the same end, a wealth of forms and checklists have been developed for the explicit purpose of assessing evaluation quality (Persell 1971), and the Joint Committee on Standards for Educational Evaluation is compiling standards for the evaluation of educational programs, projects, and materials.

Another manifestation of evaluation's self-consciousness stems from an increasing awareness on the part of evaluators and educational researchers that many related studies are conducted with little cumulative impact on educational knowledge and practice. In an attempt to remedy this situation, the field has recently emphasized integrative meta-analyses (Glass 1977, Light 1979) in which results from associated studies are combined quantitatively to draw conclusions about a substantive area. For example, Glass and Smith (1979) analyzed the results of about 80 research efforts that estimated the effect of class size on student achievement and drew conclusions that are at odds with non-quantitative literature reviews and syntheses of research on class size.

In addition to the evaluation of evaluations and meta-analysis, a third practice showing the self-critical posture of educational evaluation is that of secondary analysis (Cook 1974, Burstein 1978). This process involves the independent reanalysis of raw data from an evaluation to address new questions or to test published conclusions.

Cook and Gruder (1978) have reviewed these and other related practices and classify them as belonging to a field labeled "metaevaluation research." Cook and Gruder's conceptualization of metaevaluation research as the general organizing structure for several forms of evaluator self-criticism advances the metaevaluation technology of Scriven (1969) and Stufflebeam (1974), and represents a leap forward for the improvement of evaluation. They systematically define metaevaluation models (ways in which the technical quality of evaluations can be improved) and give examples to illustrate the application of each. However, what is missing from Cook and Gruder's formulation is a convincing argument that metaevaluation research consists of something more than a group of disparate techniques. In spite of their statement that different models of metaevaluation research are "not necessarily independent," Cook and Gruder offer little recognition that different metaevaluation research models are highly related in terms of the work involved in their application, and that multiple models often can be present in the same study.

The perspective of this paper is that evaluations can and should involve many models of metaevaluation research. Based on this view, the paper shows how each of Cook and Gruder's models have been applied in the national evaluation of Project Follow Through, a large-scale federally-funded experiment in education. This is accomplished by briefly describing Follow Through, identifying the participants in the national evaluation, describing their roles during and subsequent to the evaluation, reviewing Cook and Gruder's models of metaevaluation research, and assessing the degree to which the roles of those involved in the Follow Through evaluation map onto the metaevaluation models.

Follow Through

The origins of Follow Through can be traced to an early evaluation of Head Start (Wolff and Stein 1966) which asserted that Head Start increased children's school readiness. On the basis of this study, the Johnson administration proposed a Follow Through program that would continue service to disadvantaged children through the third grade. Funding problems forced a change in the emphasis of Follow Through from a full-scale service program to an experimental program in education in which a variety of educational specialists (sponsors) each implemented an educational model in several school districts. The range of educational models implemented in Follow Through include: Highly structured models emphasizing academic skills in reading and arithmetic; models stressing cognitive thinking through asking and answering questions, problem solving, and creative writing; models emphasizing social-emotional development and encouraging exploration and discovery in academic areas; and models focusing on preparing parents to improve the education and development of their children (U.S. General Accounting Office 1975).

In 1969 the U.S. Office of Education (USOE) contracted for a national evaluation of Follow Through. The focus of the evaluation was on comparing the relative impact of the various educational models implemented in Follow Through on the academic skills and affective levels of the children they served. The goal was to determine which model of education "works best."

The national Follow Through evaluation was subject to many of the problems that typically plague field-based studies. Debates took place and there continues to be controversy on the full range of evaluation issues

including, for example, the research questions, the evaluation design, the measurement battery, the the analytic techniques, and the reporting format. The evaluation was complicated by confusion over the purpose of Follow Through. According to Haney (1977), four separate conceptions of the program were held in 1968:

> ...it was a service program aimed at providing disadvantaged children with a range of educational, medical, dental, nutritional, social psychological services. Also, it was a social action program mandating parent participation and community involvement. From another perspective, it was a planned variation experiment designed to test alternative models of education. And at the same time, it was also a research and development effort designed to develop and refine alternative models. (p. 22)

Given these alternative views of the program, it is not surprising that debates arose over the proper research questions and outcome measures.

The evaluation's problems were exacerbated by the belief of Follow Through's founders that program effects would be so large that they would be apparent regardless of the design. According to Egbert (1973),

> Its design stemmed from the conviction that sufficient improvement could be affected in the institutions serving children that children's development would be so markedly superior as to be readily demonstrated...Follow Through's design was born also from the conviction that unless such substantial differences were manifest, the really massive increases in spending that would be required could not be justified. (p. 25)

When it became apparent that large effects were not to be found, difficulties with the evaluation design took on a more important role than was initially anticipated.

These and other problems caused considerable controversy throughout the ten-year life of the evaluation. The findings of the final national evaluation report were given substantial play in the popular press and have

been the subject of debate in the research community. Critiques have been written, reanalyses conducted, and findings reinterpreted.

Evaluation Participants and Their Roles

Many participants were involved in the national Follow Through evaluation. Table 1 differentiates between two major groups of participants on the basis of whether their evaluation roles were formal or informal.[1] Further, it briefly defines the roles played by each of the participants during and subsequent to completion of the national evaluation.[2]

Insert Table 1 About Here

The Office of Evaluation and Dissemination (formerly the Office of Planning, Budgeting and Evaluation) within USOE was the immediate client for the national evaluation. They funded, monitored, and helped guide the evaluation. The evaluation was organized by USOE such that contracts were let to different groups for different portions of the work.

National evaluation contracts were let by USOE to SRI International (SRI), Abt Associates Inc. (AAI), the Huron Institute, and RMC Research Corporation (RMC). SRI and AAI had complementary contracts to conduct the summative impact evaluation. SRI was responsible for the data collection, and for data base management and maintenance. On the other hand, AAI contracted to analyze the data and report the results (Stebbins, St.Pierre, Proper, Anderson, and Cerva 1977). Smaller contracts were let to the Huron Institute for a variety of tasks, e.g., preparing a technical history of the evaluation (Haney 1977), and providing technical advice to USOE on AAI's analysis and

reporting activities. A contract was also let to RMC to conduct an analysis of the costs associated with implementing each Follow Through model (Rodgers, Flynn, Errecart, and Hoff 1977).

As part of its work, AAI used the services of several technical consultants. These persons had responsibilities such as attending and providing input at meetings on design and analysis issues, reviewing the results of analyses, and reading and commenting on reports. Their role was similar to Huron's role of giving technical advice: the key difference was that the Huron staff was responsible for providing input to USOE on AAI's work, whereas AAI's consultants provided input to AAI. In practice, both groups of advisors (AAI consultants and Huron staff) worked together to enhance the evaluation in a formative manner.

The other key actors with formal evaluation roles were the Follow Through sponsors. These people were funded by USOE to implement their educational models in several school districts and to provide continuing support to the districts in maintaining the models. Although the sponsor's models were the subject of the national evaluation (as noted earlier, the key evaluation question was to determine which model worked best), many sponsors used part of their funding to conduct their own formative and/or summative evaluations. The nature and extent of these evaluations differed widely by sponsor. Some were comprehensive, providing quick feedback to both the school districts and the sponsor on level of program implementation, on parent and teacher perceptions of the model, and on the effects of the model on participating children's academic and affective levels. Other sponsor evaluations were much more restricted.

Several participants with formal roles continued their involvement with Follow Through after the national evaluation was completed. For AAI these post-evaluation activities included disseminating reports and report summaries (Stebbins et al 1978, Anderson 1977), preparing journal articles based on the evaluation (St.Pierre 1978, 1979), and responding to critiques of the national evaluation (Anderson, St.Pierre, Proper, and Stebbins 1978). Similarly, USOE disseminated findings of the study (Kennedy 1978), responded to critics of the evaluation (Wisler, Burns, and Iwamoto 1978) and worked on synthesizing and interpreting the work of AAI (summative impact analysis), RMC (cost), Huron (technical history, parent/teacher studies), the Follow Through sponsors (internal evaluations), and some of USOE's own analyses (USOE in preparation). Various Follow Through sponsors were also involved in post-evaluation activities including both critiquing and defending the national evaluation (Education Daily 1977, Becker 1978), and publishing the results of sponsor-based studies (Hodges and Sheehan 1978). The Huron Institute contributed to the post-evaluation discussion through a paper by Haney (1978) which contrasted differences in the effectiveness of Follow Through in selected school districts as assessed by the national evaluation and as assessed by the Joint Dissemination Review Panel.[3] Further, Haney and Pennington (1978) conducted reanalyses of data collected from the parents and teachers of children participating in the national evaluation. Finally, SRI continued to maintain and document the national evaluation data base (Middleton and Durgin 1978).

Some participants played important roles in the evaluation even though they were not involved formally. The activities in which these

persons participated took place largely after the national evaluation final report was completed. For example, a group funded by the Ford Foundation published a critique of the national evaluation (House, Glass, McLean and Walker 1978). Further, members of the House et al. group debated the results of the evaluation with AAI and USOE staff members at meetings of interested professionals (e.g., the American Educational Research Association). Other examples of participants with informal roles include Camilli (1979) who reanalyzed the national evaluation raw impact data as part of his doctoral dissertation, and Bereiter and Kurland (1978) who conducted analyses of the aggregate data presented in the national evaluation final report.

Models of Metaevaluation Research and Follow Through Evaluation Roles

Cook and Gruder (1978) define seven models of metaevaluation research by crossing three dimensions: whether the metaevaluation is performed parallel or subsequent to the primary evaluation, whether the raw evaluation data are or are not reanalyzed by the metaevaluator, and whether a single or multiple independent data set is used in the evaluation. For each metaevaluation research model, Table 2 gives examples of participants and their roles in the national Follow Through evaluation.

The first four models all focus on work that takes place subsequent to a primary evaluation. The House et al (1978) critique of the national evaluation is an example of the first model--an essay review of an evaluation. It reviews the Stebbins et al (1977) final report as well as some of the early history of the evaluation. Articles by Bereiter and Kurland (1978) and by Becker (1978) also fall into this category as they review both the House

et al critique and the Stebbins et al report. All of the reviewers cited here offer reinterpretations of the evaluation results based on the aggregate data presented by Stebbins et al. However, none of them conduct an empirical reexamination of the raw evaluation data.

Insert Table 2 About Here

The work by Haney (1977, 1978), Hodges (1978), Hodges and Sheehan (1978) and USOE (in preparation) are all examples of the second model of metaevaluation research--a review of the literature about a specific program. Haney's review is a technical history of the evaluation and includes much information on the early decision-making that contributed to the later directions of the evaluation. He also reviews the results of each of the federally-funded portions of the national evaluation. Hodges (1978) argues for the worth of the Follow Through experience by discussing the knowledge generated from Follow Through in seven different areas. Hodges and Sheehan (1978) review the work of several Follow Through sponsors and discuss the results of their internal evaluations. Finally, USOE (in preparation) has been integrating the findings from all of the federally-funded Follow Through evaluation reports and plans to produce a synthesis of the Follow Through evaluation experience. These works fit the second rather than the first model of metaevaluation research as they move beyond the Stebbins et al national evaluation report in their search for evidence about Follow Through.

There are two examples of the third metaevaluation model--an empirical reevaluation of an evaluation or program. Camilli (1979) obtained

from AAI a copy of the raw evaluation data for reanalysis as part of his doctoral work. In addition, Haney and Pennington's (1978) work in the area of analyzing data collected on parent and teacher attitudes falls into this category.

The fourth metaevaluation model--empirical reevaluation of multiple data sets about the same program--is exemplified by the work of Goodrich and St.Pierre (1979). Their research stems from a contract with USOE to study the feasibility of using data sets maintained by the Follow Through sponsors to assess possible delayed effects of Follow Through. This work doesn't fit the model exactly since its purpose was to assess the feasibility of conducting a reanalysis of multiple data sets rather than performing the analysis itself. However, Goodrich and St.Pierre documented the existence and quality of several relevant data bases, and the possibility for analysis exists.

The final three metaevaluation models each focus on work that takes place simultaneously with the primary evaluation. The fifth model--consultant metaevaluation--is exemplified by the work of several evaluation participants. As noted earlier, both the Huron Institute and AAI's external consultants reviewed the work of AAI in an ongoing capacity. In addition, USOE provided ongoing feedback on the progress of the evaluation. Finally, the Follow Through sponsors (whose educational models were the subject of the evaluation) were given an opportunity to react to and critique an early draft of the final evaluation report. None of these activities included data manipulation, as they all focused on reviewing evaluation plans, designs, or reports.

The work of St.Pierre (1978) is an example of the sixth metaevaluation model--simultaneous secondary analysis of raw data. This reanalysis

was conducted as part of the national evaluation effort, according to the multiple analysis strategy employed by AAI. Under this approach, several analyses of the data were performed in order to better estimate the true treatment effect. St.Pierre (1978) published the results of one of those reanalyses which led to somewhat different conclusions than those presented in the national evaluation report. This procedure is not secondary analysis as traditionally defined (Cook 1974), inasmuch as the analyses were conducted by the primary evaluation team. However, it does provide an example of alternative analyses conducted in parallel with the primary analyses.

The seventh model of metaevaluation research--multiple independent replications--refers to an approach in which separate groups carry out independent evaluations of a program. According to Cook and Gruder (1978) this approach is rarely used. However, as noted earlier in this paper, some of the Follow Through sponsors used portions of their funding to conduct internal evaluations that were independent of the external national study. Sponsor evaluations often aimed at assessing different outcomes, with different measures, using different samples, data collection strategies, and analysis techniques than the national evaluation. The national study was comprehensive and involved the study of many educational models with a limited set of measures. It had breadth but lacked depth. In contrast, the sponsor studies were idiosyncratic, being conducted on a sponsor-by-sponsor basis and using a wide range of measures to assess a variety of outcomes.

Conclusion

The analysis presented in this paper shows that the national Follow Through evaluation and the ensuing debate over its findings contain

applications of each of Cook and Gruder's metaevaluation research models. Some of the applications are clearer and fit the definitions given by Cook and Gruder better than others, but a case has been made that all models are represented.

As noted earlier, the national Follow Through evaluation has a long history of problems. Under such adverse circumstances it would be fair to ask whether we expect metaevaluation research to provide useful input, or is the application of metaevaluation research an example of throwing good money after bad? The answer to this question is contained in the key premise underlying metaevaluation research: that evaluations should be subject to critical review.

One use of such critical review is to provide a balanced perspective for decision makers, practitioners, and evaluators who are interested in the results and methods of an evaluation. Without the application of metaevaluation research techniques, evaluation reports would go unchallenged and evaluation users would often receive input only from a single source. Metaevaluation research helps to avoid this condition by providing opportunities for independent input during the course of an evaluation, and by allowing reanalyses, encouraging alternative interpretations, and seeking a variety of opinions subsequent to the completion of a study. Without the use of metaevaluation research methods there would have been no debate over the Follow Through evaluation, and it is just this debate that often brings to light many of the most important issues in the evaluation of social programs.

The use of multiple metaevaluation research models greatly enhanced both the national evaluation, and the amount and quality of our knowledge

about Follow Through and early childhood education. The input provided by consultants, USOE, the Huron Institute, and the Follow Through sponsors was helpful for the specific purposes of providing formative input to and improving the national evaluation. The simultaneous reanalysis of data by AAI enabled alternative interpretations of the national evaluation data, while independent evaluations conducted by the Follow Through sponsors supplied information about the effects of Follow Through on measures not used in the national study. The debate that followed the completion of the national evaluation final report provided reviews of the national evaluation, of other related literature, and reanalyses of the national evaluation data. Finally, there is the prospect for an empirical reevaluation of several data sets in order to determine the effects of Follow Through models on children some years after they complete the program.

These activities did not happen because the Follow Through evaluation planners had the foresight to provide for metaevaluation research at the beginning of the study. In fact, the only model that was formally included as part of the national evaluation was consultant metaevaluation. The other applications occurred primarily because of professional interest on the part of concerned evaluators and educators in ensuring that the Follow Through evaluation was not accepted without critical review, because of the Follow Through sponsors' interest in conducting their own internal evaluations, and because of general interest in assessing the effects of Follow Through on children after they leave the program.

While metaevaluation research was not a commonly discussed topic at the inception of the Follow Through evaluation in the late 1960s, the bent

of educational evaluators and researchers toward self-evaluation and self-criticism that was discussed at the beginning of this paper is making the benefits of metaevaluation research visible to evaluators, evaluation users, and evaluation funding agencies.

TABLE 1

National Evaluation Participants and Their Roles

		ROLE DURING THE NATIONAL EVALUATION	ROLE SUBSEQUENT TO THE NATIONAL EVALUATION
PARTICIPANTS WITH FORMAL ROLES	Abt Associates Inc.	Data analysis, reporting (Stebbins et al 1977)	Disseminate findings (Stebbins et al 1978, Anderson 1977), respond to critique (Anderson et al 1978), review the evaluation debate (St.Pierre 1979)
	Consultants to Abt Associates Inc.	Critique & provide technical assistance on analysis and reporting	---
	Follow Through Sponsors	Implement & maintain educational models, review & critique national evaluation report, conduct internal evaluations	Critique national evaluation (Hodges 1978), alternative interpretation of national evaluation data (Becker 1978), disseminate findings of sponsor-based studies (Hodges and Sheehan 1978)
	Huron Institute	Technical consultants to USOE, technical history of the evaluation (Haney 1977)	Contrast national evaluation findings with JDRP funding (Haney 1978), analysis of national evaluation parent and teacher data (Haney and Pennington 1978)
	RMC Research Corporation	Cost study (Rogers et al. 1977)	---
	SRI International	Data collection, data base management	Data base maintenance and documentation (Middleton and Durgin 1978)
	U.S. Office of Education	Fund and monitor the evaluation	Respond to critique (Wisler, Burns and Iwamoto 1978), disseminate findings (Kennedy 1978), integrate various FT evaluation studies (USOE in preparation)
PARTICIPANTS WITH INFORMAL ROLES	Bereiter and Kurkland (1978)	---	Analysis of aggregate data
	Camilli (1979)	---	Reanalysis of raw data
	House, Glass, McLean & Walker (1978)	---	Critique of national evaluation, analysis of aggregate data

TABLE 2

Map of Follow Through Evaluation Participants and Their Roles on Metaevaluation Models

METAEVALUATION MODELS				EVALUATION PARTICIPANTS AND THEIR ROLES
Subsequent to primary evaluation	Data not manipulated	Single data set	1. Essay review of an evaluation report	House, Glass, McLean and Walker (1978); Bereiter & Emrland (1978); Becker (1978)
		Multiple data sets	2. Review of the literature about a specific program	Haney (1977, 1978); Hodges (1978) USOE (in preparation); Hodges and Sheehan (1978)
	Data manipulated	Single data set	3. Empirical reevaluation of an evaluation or program	Camilli (1979); Haney and Pennington (1978)
		Multiple data sets	4. Empirical reevaluation of multiple data sets about the same program	Goodrich and St.Pierre (1979)
Simultaneous with primary evaluation	Data not manipulated	Single or multiple data sets	5. Consultant metaevaluation	AAI consultants, USOE Project Officer, Huron Institute, Follow Through sponsors
	Data manipulated	Single data set	6. Simultaneous secondary analysis of raw data	St.Pierre (1978)
		Multiple data sets	7. Multiple independent replications	Follow Through sponsors (internal), national evaluation (external)

Notes

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[1] Not all participants nor all roles are given in Table 1. Rather than being a catalog of Follow Through evaluation activities, the intent is to display examples that fit a range of metaevaluation models.

[2] In April 1977 Abt Associates Inc. delivered the final summative evaluation report to USOE (Stebbins et al 1977) signaling the end of the formal evaluation. Follow Through evaluative activities have continued, including formative work performed by the Follow Through sponsors, and planning activities for future studies. We use the Stebbins et al report as a convenient marker for the end of the 10-year long national summative evaluation.

[3] The Joint Dissemination Review Panel (JDRP) is a panel of persons from the U.S. Office of Education and the National Institute of Education that meets periodically to review the evidence of effectiveness submitted for a wide variety of educational products and practices. Products that meet JDRP standards may be endorsed by the Education Division of the Department of Health, Education and Welfare as exemplary, and may be disseminated using Federal Education Division funds. A monograph describing the purpose of the JDRP and the ways in which JDRP submissions may be prepared has been written by Tallmadge (1977).

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